



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,384	08/02/2006	Shouhei Kamiya	H&C-5240	8427

7590 02/25/2010
Mattingly, Stanger, Malur & Brundidge
John R. Mattingly
1800 Diagonal Road
Suite 370
Alexandria, VA 22314

EXAMINER

ROCCA, JOSEPH M

ART UNIT	PAPER NUMBER
----------	--------------

3616

MAIL DATE	DELIVERY MODE
-----------	---------------

02/25/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,384	Applicant(s) KAMIYA ET AL.	
	Examiner JOSEPH ROCCA	Art Unit 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/2/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumann (US Pub. App. 2001/0041123) in view of Charles (WO 02/079581) (as translated by US Pub. App. 2004/0060712 an English language equivalent), Link (US 4,711,467), and Hansen (US 3,972,249).

Baumann discloses a working machine comprised of a frame **20** that is constituted by a pair of vertical plates **30, 40** which are separated to the left and right sides and extended from the front to the rear directions, and a bottom plate **91, 92** which couples said pair of vertical plates in the left and right direction (Figs. 1-5). Baumann further teaches that the frame constitutes a mobile vehicle body and extending from the front to the rear, a boom **11** apparatus provided for said frame **20**. Additionally, Baumann teaches that the boom is operated by a plural number of hydraulic boom actuators **17, 18** (hydraulic cylinders) (Figs. 1-3, ¶¶ 0045-46).

Baumann does not mention that the hydraulic actuators / cylinders are operated by a plural number of directional control valves controlling an operation of said boom apparatus by supply or discharge of pressure oil relative to said individual hydraulic actuators, and a plural number of operation levers switching the individual directional

Art Unit: 3616

control valves in order to control the supply and discharge of pressure oil relative to said individual hydraulic actuators. Similarly, Baumann does not disclose that said operation levers and said direction control levers are mounted to a bracket that is a mounting plate to construct a lever/valve assembly; and said lever/valve assembly is mounted to be attachable to or detachable from one of said pair of vertical plates constituting said frame by the use of said bracket along the front and rear directions.

Charles teaches a loader vehicle (a working machine) having hydraulic actuators (hydraulic cylinders) that are operated by a plural number of directional control valves controlling an operation of said boom apparatus by supply or discharge of pressure oil relative to said individual hydraulic actuators (i.e. hydraulic cylinders), and a plural number of operation levers (individual manual controls shown in Figs. 1, 3, and 4 and discussed in ¶¶ 0045-54) switching the individual directional control valves in order to control the supply and discharge of pressure oil relative to said individual hydraulic actuators (¶¶ 0045-54, note discussion of hydraulic circuit and supplying the actuators). Charles further teaches that said operation levers and said direction control levers are mounted to a bracket **31** that is a mounting plate to construct a lever/valve assembly.

It would have been obvious to one of ordinary skill in the art to have modified Baumann to utilize both (i) hydraulic cylinders that are operated by a plural number of directional control valves controlling an operation of said boom apparatus by supply or discharge of pressure oil relative to said individual hydraulic actuators, and a plural number of operation levers switching the individual directional control valves in order to control the supply and discharge of pressure oil relative to said individual hydraulic

Art Unit: 3616

actuators, and (b) that said operation levers and said direction control levers are mounted to a bracket that is a mounting plate to construct a lever/valve assembly, in view of the teachings of Charles, since doing so amounts to no more than the obvious combination of familiar elements (known hydraulic components (actuators / cylinders) and known control elements (levers and valves) that are known to be used on working vehicles) by known methods (using the components discussed above (e.g. levers, valves, mounting brackets, etc.) together as part of a working vehicle) to achieve a predictable result (i.e. a working vehicle having both (i) hydraulic cylinders that are operated by a plural number of directional control valves controlling an operation of said boom apparatus by supply or discharge of pressure oil relative to said individual hydraulic actuators, and a plural number of operation levers switching the individual directional control valves in order to control the supply and discharge of pressure oil relative to said individual hydraulic actuators, and (ii) that said operation levers and said direction control levers are mounted to a bracket that is a mounting plate to construct a lever/valve assembly).

The combination of Baumann and Charles does not clearly teach that the lever/valve assembly is mounted to be attachable to or detachable from one of said pair of vertical plates constituting said frame by the use of said bracket along the front and rear directions. Link teaches a working machine having a lever/valve assembly that is mounted on a bracket comprising a mounting plate **70** that is attachable to or detachable from one of said pair of vertical plates **40** constituting said frame. It would have been obvious to one of ordinary skill in the art to have further modified the

Art Unit: 3616

combination of Baumann and Charles such that the lever/valve assembly that is mounted on a bracket comprising a mounting plate that is attachable to or detachable from one of said pair of vertical plates constituting said frame, in view of Link, since doing so amounts to no than the obvious combination of familiar elements (a known lever/valve assembly for controlling vehicle functions and a known mounting plate bracket for mounting controls on a vehicle) according to known methods (using the known control mounting plate to mount the known lever/valve control assembly) to achieve a predictable result (a lever/valve assembly that is mounted on a bracket comprising a mounting plate).

The combination of Baumann, Charles, and Link teach all limitations of claim 1, including attaching the mounting plate bracket to a frame, except for further teaching that the mounting plate bracket, for mounting the lever/valve assembly, is attached along the front and rear directions. Hansen teaches mounting a control lever assembly 5 in a front and rear direction of the vehicle (Fig. 1). It would have been obvious to one of ordinary skill in the art to have further modified the device taught by Baumann, Charles, and Link, such that the lever/valve assembly is mounted to be attachable to or detachable from one of said pair of vertical plates constituting said frame by the use of said bracket along the front and rear directions, in view of Hansen, since doing so amounts to no more than the obvious combination of familiar elements (a known mounting plate bracket attached to a frame for mounting a lever/valve control assembly and a known mounting plate for mounting controls along the front and rear direction) according to known methods (mounting the lever/valve control assembly and mounting

Art Unit: 3616

plate along the front and rear direction of the vehicle) to achieve predictable results (a lever/valve assembly mounting plate attached to the frame along a front and rear direction). Moreover the above modification would achieve the desirable result of allowing the controls to be next to the drivers seat, so that they may be easily grasped and operated by the driver.

With respect to claim 3, the device taught by the combined teachings of Baumann, Charles, Link, and Hansen, further teaches that a tilt correction hydraulic cylinder is provided on the front side of said frame in order to correct the left or right tilting of said vehicle body, and a directional control valve controlling said tilt correction hydraulic cylinder is located in front of said bracket. See, specifically, the hydraulic cylinders taught by Baumann for controlling tilt taught in ¶ 0047. This feature when viewed in combination with valves taught by Charles and the other features taught by the prior art of record in this rejection teaches the additional features of claim 3.

Regarding claim 6, the device taught by the combined teachings of Baumann, Charles, Link, and Hansen further teaches that an operator cab used when manipulating said operation levers is provided for one of said vertical plates to which said lever/valve assembly is attached (see specifically operator cab of Baumann, which is present in the device taught by combined teachings of the references).

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baumann as modified above, as applied to claims 1, 3, and 6, and further in view of WO 03/080497 (as translated by US Pub. App. 2005/0008468 an English language equivalent). Baumann as modified above, as applied to claims 1, 3, and 6 discloses all

Art Unit: 3616

limitations of claim 2 except for a stabilizer apparatus which is to be operated by a hydraulic stabilizer actuator being provided at the front portion of said frame, wherein a directional control valve which controls said hydraulic stabilizer actuator is located in front of said bracket in the vicinity of the position whereat said stabilizer apparatus is attached. WO 03/080497 discloses a hydraulically actuated stabilizer apparatus **18** located at the front of the frame (¶¶ 0059-60). It would have been obvious to one of ordinary skill in the art to have further modified Bauman as modified above with regard to claims 1, 3, and 6, to additionally utilize a stabilizer apparatus which is to be operated by a hydraulic stabilizer actuator being provided at the front portion of said frame, in view of WO 03/080497, since doing so would achieve the predictable and desirable result of using familiar elements according to known methods to improve the stability of the vehicle. Furthermore, as discussed above, with respect to claims 1, 3, and 6, Bauman as modified teaches mounting control valves and their related levers on a mounting plate in the orientation claimed. Accordingly, it would have been obvious to one of ordinary skill in the art to have further utilized this mounting plate to mount the valves for a stabilizer, since mounting the stabilizer control valve on the plate would provide a strong and easily accessible mounting location, that is no more than the predictable result of combining familiar elements according to known methods. In particular, one of ordinary skill in the art would have realized that it is desirable to mount the valve for the stabilizer at the front of the plate, since the stabilizer is also located at the front of the vehicle, because doing so would require less material and less potential for interference with other components (thus this would be both predictable and

Art Unit: 3616

common sense to one of ordinary skill at the time of invention – i.e. it is routine to use a shorter run of lines when possible, rather than wasting additional lines when it is not necessary to do so).

4. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baumann as modified above, as applied to claims 1, 3, and 6, and further in view of Dowd (US 4,140,144). Baumann as modified above, as applied to claims 1, 3, and 6 discloses all limitations of claim 4 except for a lever/valve assembly includes an operation transmission member attached to said bracket and located between said operation levers and said directional control valves, and said operation transmission member couples said operation levers with said directional control valves to transmit the operation force of said operation levers toward said directional control valves. Dowd teaches a working vehicle (back hoe) having a boom and also a lever/valve assembly that includes an operation transmission member (e.g. **79**) attached to a bracket **10** and located between said operation levers **61-67** and said directional control valves **41-47**, and said operation transmission member **79** couples said operation levers **61-67** with said directional control valves **41-47** to transmit the operation force of said operation levers toward said directional control valves. It would have been obvious to one of ordinary skill in the art to have further modified Bauman as modified above with regard to claims 1, 3, and 6, such that said lever/valve assembly includes an operation transmission member attached to said bracket and located between said operation levers and said directional control valves, and said operation transmission member couples said operation levers with said directional control valves to transmit the

Art Unit: 3616

operation force of said operation levers toward said directional control valves, in view of Dowd, since doing so would provide an efficient means to operate the control valves of the vehicle. Moreover, doing so is obvious as amounting to no more than the use of familiar elements (a known lever/valve assembly and a known transmission member assembly for lever valve assemblies) according to known methods (using the known transmission member assembly as part of the lever/valve assembly) to achieve a predictable result (controlling the valves with a lever via the transmission member assembly).

With respect to claim 8, Baumann as modified above, as applied to claims 1, 3, and 6, and further in view of Dowd (US 4,140,144) further teaches a plural number of link mechanisms having a plural number of support pins are provided for said bracket between each of said operation levers and each of said directional control valves, and said support pins rotatably support a plural number of link members which transmit the operating force of said operation levers to said directional control valves; and said support pins of said individual link mechanisms have an axial length equivalent to a length that permits a plural number of said link members to be inserted in a row in an axial direction, and are constituted as common support pins used in common to support one or a plural number of said link members. Specifically, Applicant should note that Dowd pin **130** amounts to the claimed common support pin and would be present in the device taught by the combined teachings of the references. Again this feature would be obvious to include as no more than the use of familiar elements (a known lever/valve assembly and a known transmission member assembly for lever valve assemblies)

Art Unit: 3616

according to known methods (using the known transmission member assembly as part of the lever/valve assembly) to achieve a predictable result (controlling the valves with a lever via the transmission member assembly).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baumann as modified above, as applied to claims 1, 3, and 6, and further in view of Koga (US 4,991,700). Baumann as modified above, as applied to claims 1, 3, and 6 discloses all limitations of claim 7 except for a lock mechanism restricting the control of said operation levers is provided for said bracket of said lever/valve assembly. Koga teaches a lock mechanism restricting the control the operation of a vehicle lever so as to prevent erroneous operation of a vehicle (Abstract, 6:2-11). It would have been obvious to one of ordinary skill in the art to have utilized a lock mechanism on the bracket of the lever/valve assembly taught by Baumann as modified above, as applied to claims 1, 3, and 6, further in view of Koga, since doing so would achieve the desirable result of ensuring that an erroneous vehicle operation does not take place. For example one of ordinary skill in the art would realize that you would not want to unintentionally change an operation of the transmission or activate a stabilizer device in a circumstance where doing so is undesirable (note that both Charles and Hansen which are part of the combination of Baumann as modified above, as applied to claims 1, 3, and 6 teaches the use of transmissions and that Charles teaches the use of stabilizers).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baumann as modified above, as applied to claims 1, 3, and 6, and further in view of WO

Art Unit: 3616

03/101768. Baumann as modified above, as applied to claims 1, 3, and 6 discloses all limitations of claim 9 except for said lever/valve assembly being provided with a plural number of signal output means for outputting signals consonant with manipulation of said individual operation levers, and a plural number of signal transmission means for transmitting signals from said respective signal output means to said directional control valves and for switching said directional control valves individually. WO 03/101768 teaches a device for controlling the stability of a vehicle (roll control) wherein it is taught to use an electronic control signals to control hydraulic valves (i.e. solenoid valves controlled by an ECU). It would have been obvious to one of ordinary skill in the art to have further modified Bauman as modified above with regard to claims 1, 3, and 6, such that said bracket constituting of said lever/valve assembly is provided with a plural number of signal output means for outputting signals consonant with manipulation of said individual operation levers, and a plural number of signal transmission means for transmitting signals from said respective signal output means to said directional control valves and for switching said directional control valves individually, in view of WO 03/101768, since doing so amounts to no more than the predictable substitution of one means to actuate a valve for another (i.e. substituting the use of electronic signals for a mechanical linkage). Additionally, Applicant should note that the combination of known elements in the present claim is quite similar to that in *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157 (Fed. Cir. 2007). In Leapfrog, the court ruled that it was obvious to one of ordinary skill in the art to apply modern electronics to older

Art Unit: 3616

mechanical devices, as modifications such as this have been commonplace in recent years. *Id.* at 1161.

Conclusion

7. Applicant may wish to note that a search of the prior art does not appear to teach or disclose a device further comprising a cab having an operator's seat disposed on one side of one of the said vertical plate frame member (i.e. outer side) wherein the mounting plate for mounting the lever/valve assembly along a front/rear direction of the vehicle is mounted on the opposite side of the vertical plate (i.e. inner side) from the side where the operator's seat is located, in addition to the other recited features of claim 1.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSEPH ROCCA whose telephone number is (571)272-5191. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph Rocca/
Examiner, Art Unit 3616

/Paul N. Dickson/
Supervisory Patent Examiner, Art Unit 3616